

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/033214

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/09 C12N9/80 A61K7/28 A61K35/74 A61P43/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, Sequence Search, BIOSIS, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHEN YI-YWAN M, CLANCY K A, BURNE R A: "Streptococcus salivarius Urease: genetic and biochemical characterization and expression in a dental plaque streptococcus" INFECTION AND IMMUNITY, vol. 64, no. 2, 1996, pages 585-592, XP002346873 1996 whole document esp. pages 585,586,588,591	1-5,8,9, 14, 16-20, 23,24, 28-49, 51-58
X	BURNE R A, MARQUIS R E: "Alkali production by oral bacteria and protection against dental caries" FEMS MICROBIOLOGY LETTERS, vol. 193, 2000, pages 1-6, XP002346874 2000 whole document	1-6, 8-11,14, 16-21, 53-58
Y		24-49

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Date of the actual completion of the international search

28 September 2005

Date of mailing of the international search report

11/10/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CLANCY A, BURNE R A: "Construction and characterization of a recombinant ureolytic Streptococcus mutans and its use to demonstrate the relationship of urease activity to pH modulating capacity" FEMS MICROBIOLOGY LETTERS, vol. 151, 1997, pages 205-211, XP002346875 1997	1-5,8,9, 14, 16-20, 34-49, 51-58
Y	whole document esp. 205,207,210	23-33
X	CLANCY K A, PEARSON S, BOWEN W H, BURNE R A: "Characterization of recombinant, ureolytic Streptococcus mutans demonstrates an inverse relationship between dental plaque ureolytic capacity and cariogenicity" INFECTION AND IMMUNITY, vol. 68, no. 5, May 2000 (2000-05), pages 2621-2629, XP002346876 05-2000	1-5,8,9, 14-20, 34-59
Y	whole document esp. pges 2621, 2623, Fig.1, 2625-2626, 2627-2628	23-33
X	DONG Y, CHEN Y-Y M, SNYDER J A, BURNE R A: "Isolation and Molecular Analysis of the Gene Cluster for the Arinine Deiminase System from Streptococcus gordonii DL1" APPLIED AND ENVIRONMENTAL MICROBIOLOGY, vol. 68, no. 11, November 2002 (2002-11), pages 5549-5553, XP002346877 11-2002	1-4,6, 10,11, 14-19, 21,25, 34-43, 45,46, 48-59
Y	whole document esp. 5549,5550,5552,5553	23,28-33
X	MOROU-BERMEDEZ E, BURNE R A: "Analysis of urease expression in Actinomyces naeslundii WVU45" INFECTION IMMUNITY, vol. 68, no. 12, December 2000 (2000-12), pages 6670-6676, XP002346878 12-2000	1,2,4,5, 8,9, 18-20
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P,X	GRISWOLD A, CHEN Y-Y M, SNYDER J A, BURNE R A: APPLIED AND ENVIRONMENTAL MICROBIOLOGY, vol. 70, no. 3, March 2004 (2004-03), pages 1321-1327, XP002346879 03-2004	1,2,4,6, 10,11, 26,28
Y	whole document esp. sequence AY396288:EM_PRO and pages 1321,1322,1323 Fig.1,1326	3,5,7-9, 12-25, 27,29-59

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/092818 A (INSTITUT PASTEUR; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE; GLASER) 21 November 2002 (2002-11-21) whole document esp. claim 4, SeqID 4606	26
X	AJDIC D ET AL: "Genome Sequence of Streptococcus mutants UA159, a cariogenic dental pathogen" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 99, no. 22, 2002, pages 14434-14439, XP002989804 ISSN: 0027-8424	27
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Y	KURAMITSU H K: "Molecular genetic analysis of the influence of oral bacterial pathogens: an historical perspective" CRIT REV ORAL BIOL MED, vol. 14, no. 5, September 2003 (2003-09), pages 331-344, XP002346880 09-2003 whole document esp. pages 338, 339	1-59
P, X	GRISWOLD AR, CHEN YIM, BURNE RA: "Analysis of an arginine deiminase gene cluster in Streptococcus mutans UA159" JOURNAL OF BACTERIOLOGY, vol. 186, no. 6, March 2004 (2004-03), pages 1902-1904, XP002346881 03-2004	1-4, 7, 12, 13, 22, 27
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WO 02092818	A	21-11-2002	FR	2824074 A1	31-10-2002